

Institute of Paper Science and Technology
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CONTINUOUS BASELINE STUDY

✓ Project 1108-13

Progress Report 115

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

February 1, 1957

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

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In conjunction with the F.K.I. Continuous Baseline Study, The Institute of Paper Chemistry has been directed to identify the participating mills by means of a scrambled system of code letters. Under this system, which was initiated in Progress Report 105, each mill is identified by a code letter different from that used for the previous month.

During the period from January 1 to January 31, ninety-one different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by seventeen different F.K.I. mills to The Institute of Paper Chemistry for testing. In addition, one sample of drum linerboard and one sample of miscellaneous linerboard were submitted for evaluation by one of the participating mills; the results for this sample are tabulated separately. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I

DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	10
B	4
C	0
D	9
E	3
F	12
G	8
H	6
I	6
J	4
K	3
L	4
M	2
N	5
O	2
P	8
Q	1
S	<u>4</u>
Total	91

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from January 1, 1956, to December 31, 1956. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.1 lb., and the cumulative F.K.I. average basis weight is 43.0 lb. Hence, the index for basis weight determined in per cent as indicated above is 100.2. This signifies that the current average basis weight is slightly higher than the cumulative average.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill K had the highest average basis weight, it being 44.2 lb. or approximately 5.2% higher than the 42-lb. specification. On the other hand, Mill E had the lowest average basis weight, it being 42.3 lb. or approximately 0.7% higher than the 42-lb. specification.

The amount by which the mills vary from the 42-lb. specification is as follows:

Mill Code	Per Cent
A	+4.0
B	+2.4
C	--
D	+3.3
E	+0.7
F	+2.6
G	+1.7
H	+2.9
I	+1.4
J	+2.9
K	+5.2
L	+1.9
M	+2.9
N	+2.1
O	+1.0
P	+3.3
Q	+3.8
S	+2.1

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight results have remained at the same level--i.e., 43.1 lb.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 11.4 points for Mill O to a high of 13.7 points for Mill L. The current F.K.I. average is 12.7 points, the same as the cumulative F.K.I. average.

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II and Figure 3 that the average bursting strength values for the various mills

range from a low of 103 for Mill Q to a high of 119 for Mill L. The current F.K.I. average bursting strength is 111 p.s.i.g., slightly higher than the cumulative F.K.I. average of 108 p.s.i.g.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figure 4 and 5. The data of Table II show that Mill M had the highest average machine direction tear value of 382 units whereas Mill B had the lowest value of 304 units. Mill N had the highest cross-machine direction tear value of 417 units, and Mill E had the lowest value of 341 units. It may be noted that the current F.K.I. average machine direction tear result is slightly higher than the cumulative average and the cross-machine direction tear result is slightly lower than the cumulative average.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. average for caliper is the same as the cumulative F.K.I. average, whereas the current F.K.I. averages for basis weight, bursting strength and machine direction Elmendorf tear are slightly higher than the cumulative averages, and the current F.K.I. average for cross-machine direction Elmendorf tear is slightly lower than the respective cumulative F.K.I. average.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XX for mills A to S, respectively. In addition to the current and cumulative averages, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill for the previous twelve months excluding the current period. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor (\%)}$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index (\%)}$$

The mill factor and the mill index serve as a ready means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also contain a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry.

The results obtained on the special drum stock may be seen in Table XXI.

It may be noted in Tables III through XXI that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	10		
B	4		
C	0		
D	9		
E	3 ^a		
F	12		
G	8		
H	6		
I	6 ^a		
J	4		
K	3		
L	4		
M	2		
N	5 ^a		
O	2		

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc..
P	8		
Q	1 ^a		
S	4 ^a		
R ^b	1		

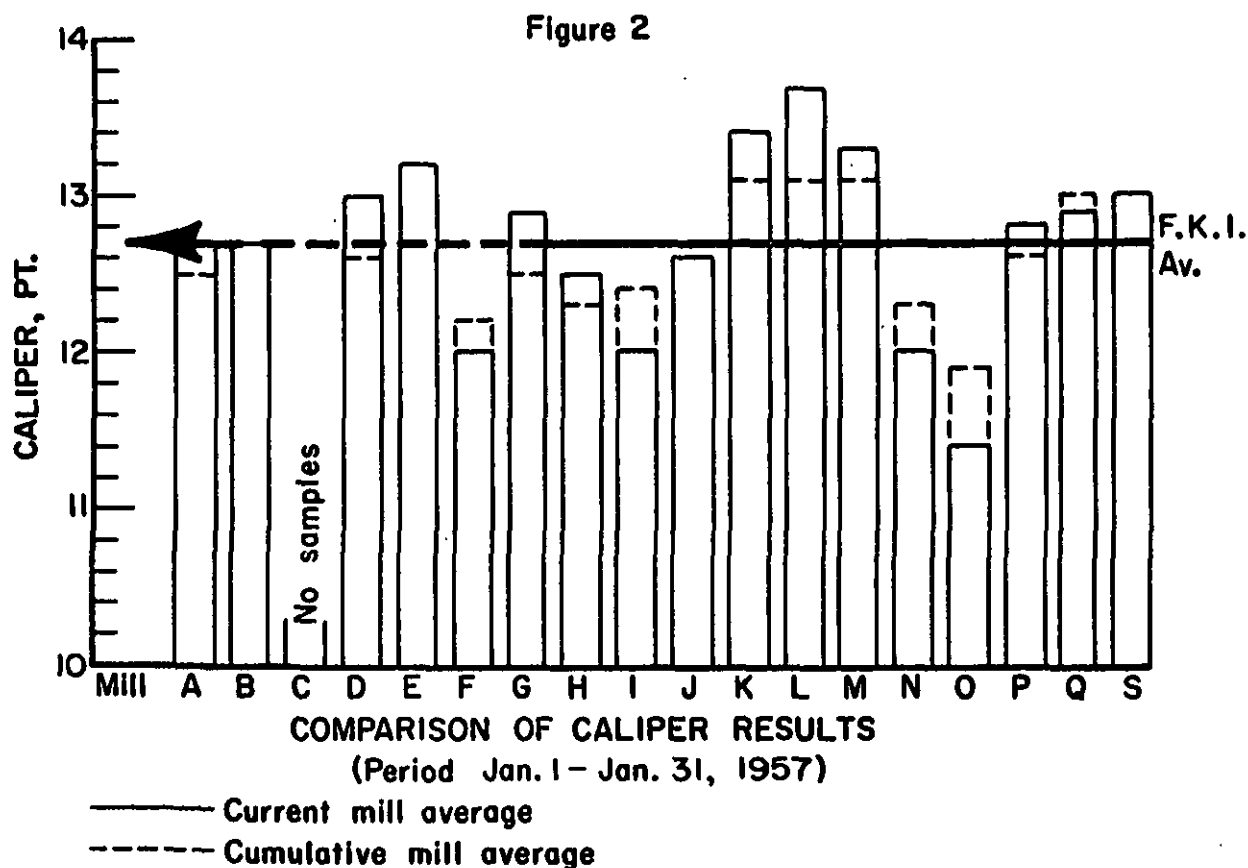
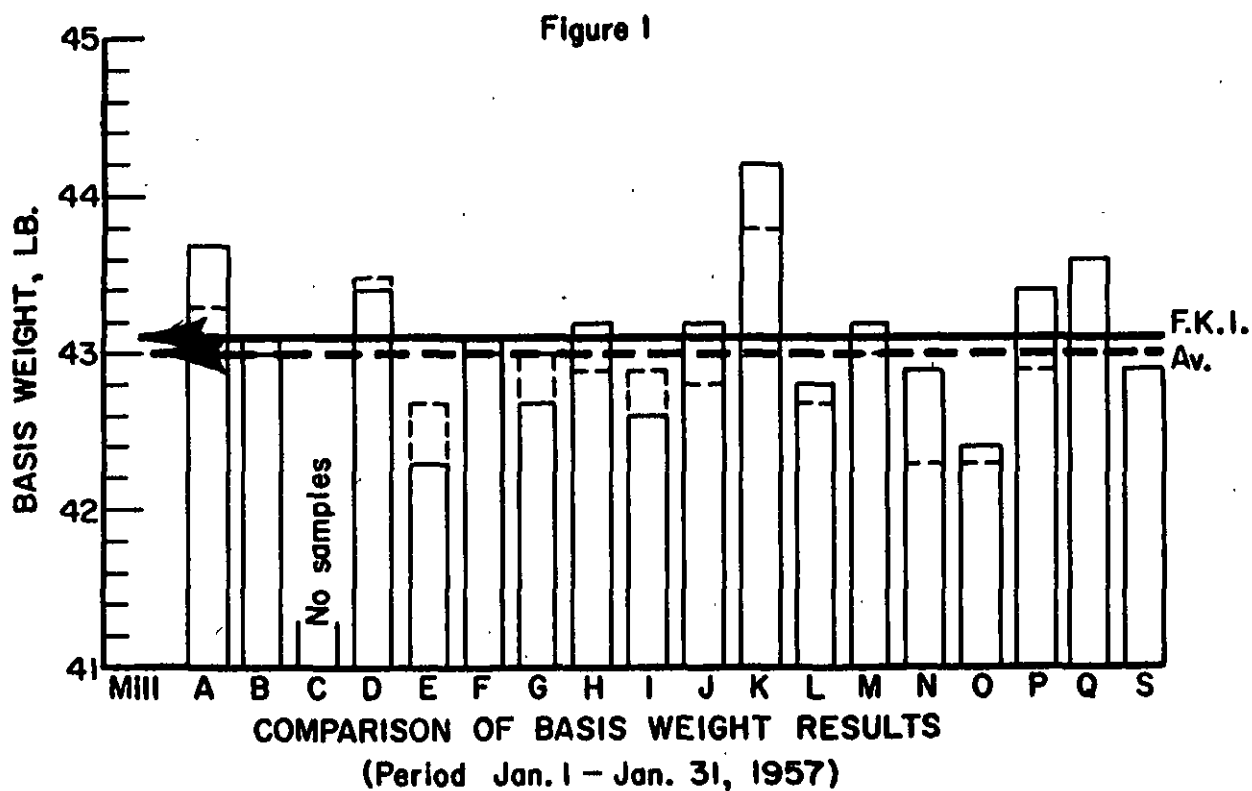
^a One side only
^b Drum linerboard

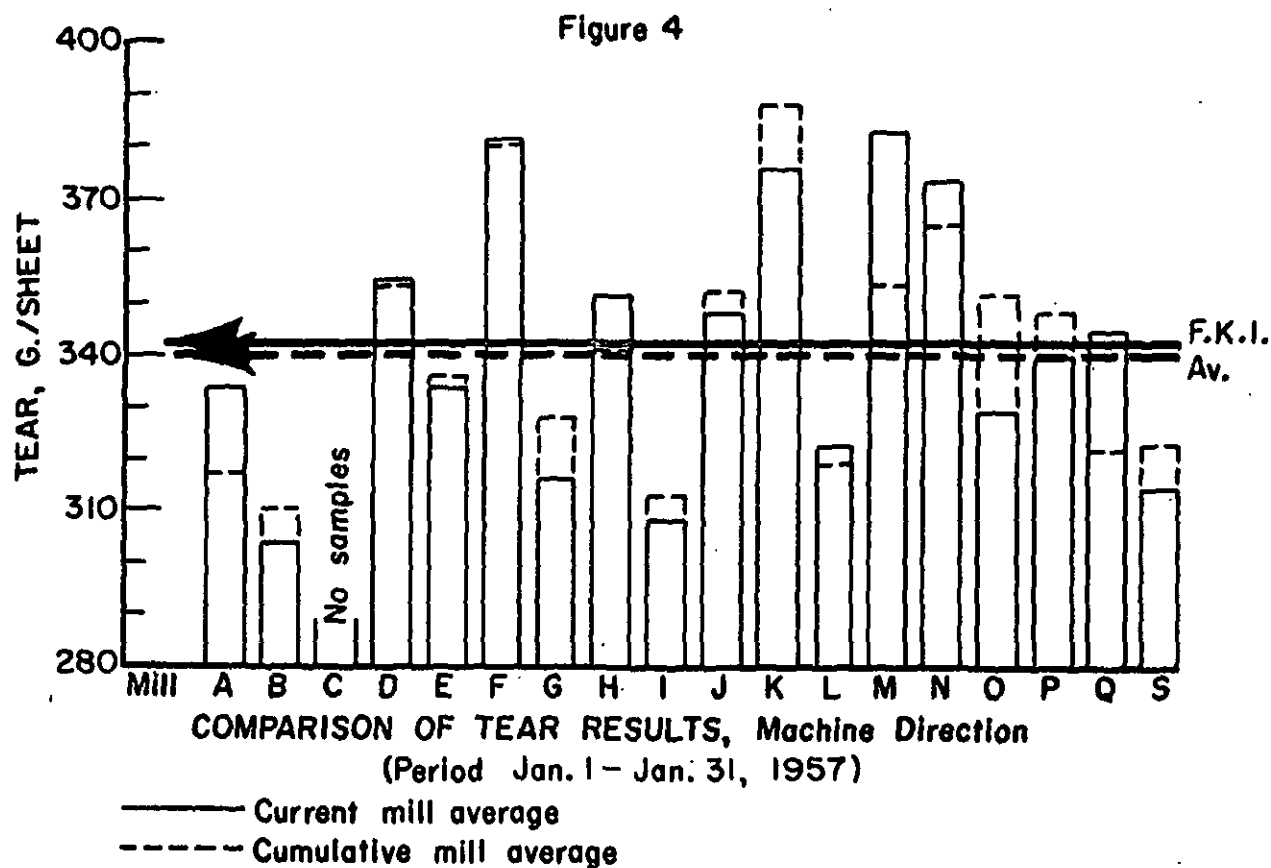
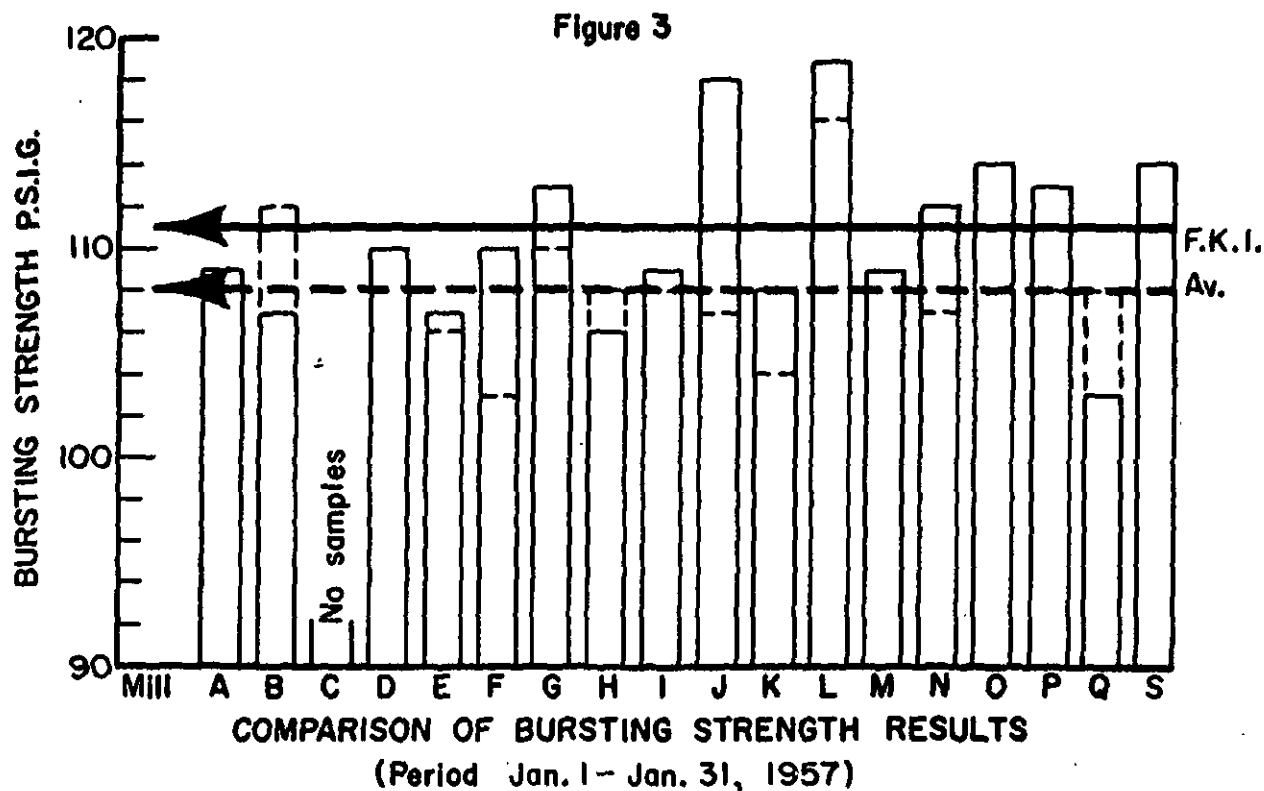
The results indicate that a majority of the mills are using
a water finish on their 42-lb. linerboard.

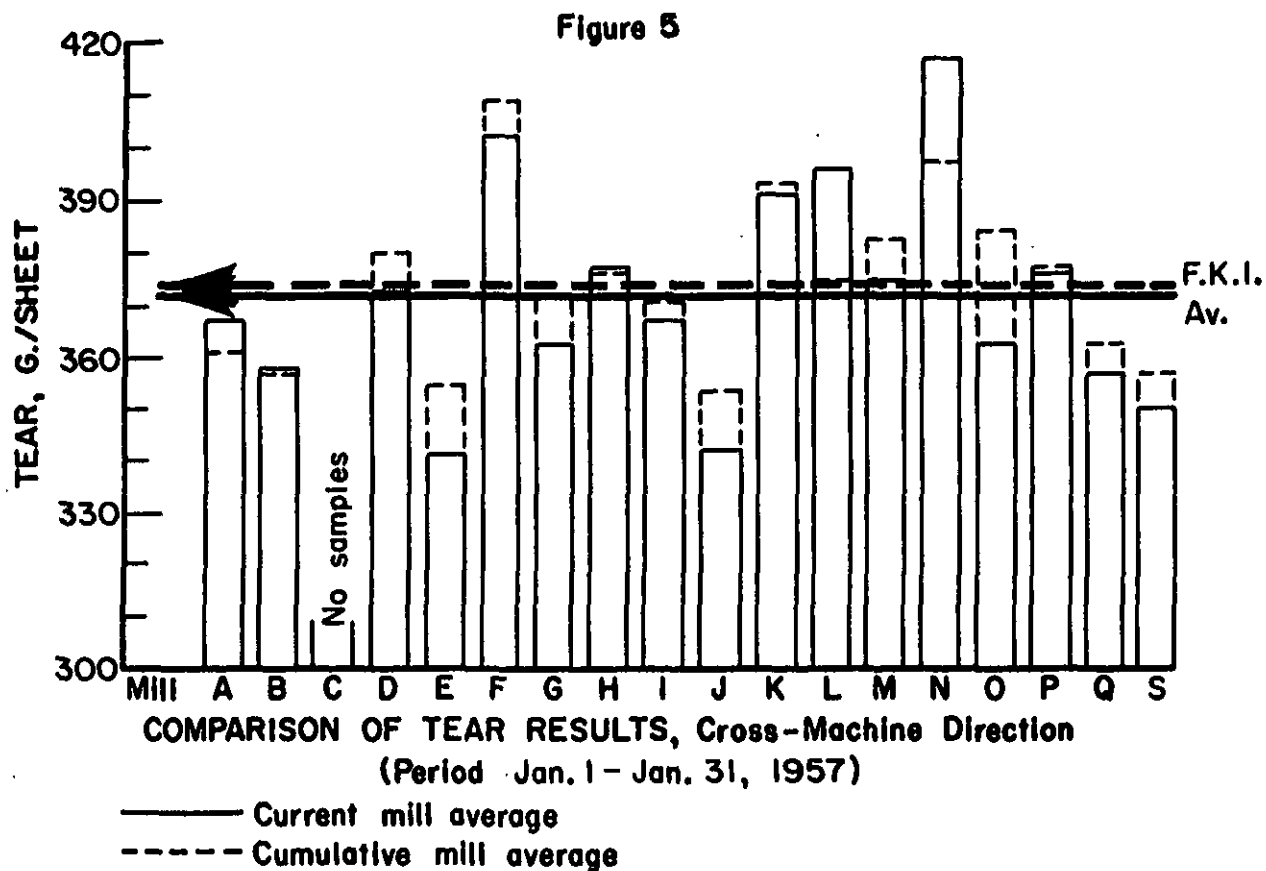
TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--JANUARY 1 THROUGH JANUARY 31, 1957

Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	In Machine	Eluendorf Tear, g./sheet Cross Machine
A	43.7	12.7	109	334	367
B	43.0	12.7	107	304	358
C	No samples submitted.				
D	43.4	13.0	110	354	373
E	42.3	13.2	107	334	341
F	43.1	12.0	110	381	403
G	42.7	12.9	113	316	363
H	43.2	12.5	106	351	377
I	42.6	12.0	109	308	367
J	43.2	12.6	118	348	342
K	44.2	13.4	108	376	391
L	42.8	13.7	119	322	396
M	43.2	13.3	109	382	375
N	42.9	12.0	112	373	417
O	42.4	11.4	114	329	363
P	43.4	12.8	113	340	376
Q	43.6	12.9	103	345	357
S	42.9	13.0	114	314	350
Current FKI Average:	43.1	12.7	111	342	372
Cumulative FKI Average:	43.0	12.7	108	340	374
FKI Index, %	100.2	100.0	102.8	100.6	99.5







SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957

TABLE III

MILL A -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
173059	W.F.	1/ 2/57	12/16/56	2	45.0	43.4	13.4	12.0	127	93	416	304
173060	W.F.	1/ 2/57	12/19/56	2	44.2	43.0	13.2	12.0	129	98	432	336
173171	W.F.	1/10/57	1/ 1/57	2	44.4	42.4	13.2	12.1	123	90	384	320
173172	W.F.	1/10/57	1/ 3/57	2	44.0	42.4	12.9	11.6	136	96	384	296
173203	W.F.	1/16/57	1/10/57	1	45.0	44.0	12.9	11.3	122	93	328	256
173204	W.F.	1/16/57	1/10/57	1	44.4	43.8	12.9	11.8	135	100	368	272
173254	W.F.	1/23/57	1/13/57	2	44.2	42.0	13.2	12.9	121	87	384	232
173255	W.F.	1/23/57	1/16/57	1	44.4	42.2	13.2	12.8	113	85	456	272
173307	W.F.	1/28/57	1/20/57	2	44.6	43.2	13.0	12.0	122	90	360	280
173308	W.F.	1/28/57	1/20/57	2	43.8	42.0	13.0	12.0	118	82	368	272
Current Mill Average:					43.7		12.7		109		334	
Cumulative Mill Average:					43.3		12.5		109		317	
Mill Factor, %					100.9		101.6		100.0		105.4	
Mill Index, %					101.6		100.0		100.9		98.2	
											101.7	
											98.1	

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE VI
MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
173125	W.F.	1/7/57	1/2/57	-	44.2	43.8	44.0	13.6	13.0	13.2	139	100	119	472	320	378 ^a
173126	W.F.	1/7/57	1/3/57	-	45.4	42.6	44.0	13.2	12.2	12.8	136	95	120	400	336	366 ^a
173142	W.F.	1/7/57	1/4/57	-	43.6	42.0	42.7	13.9	12.9	13.3	130	84	108	424	288	349 ^a
173193	W.F.	1/14/57	1/9/57	-	44.0	42.0	43.2	12.8	11.8	12.3	132	100	113	368	296	335 ^a
173194	W.F.	1/14/57	1/10/57	-	44.0	43.0	43.6	14.0	12.8	13.3	132	80	105	416	304	351 ^a
173195	W.F.	1/14/57	1/11/57	-	45.0	44.0	44.1	13.2	12.5	12.9	122	74	105	448	344	366 ^a
173256	W.F.	1/23/57	1/16/57	-	43.6	41.6	42.4	13.6	12.8	13.2	127	87	105	360	232	301 ^a
173257	W.F.	1/23/57	1/17/57	-	45.6	43.2	44.4	13.9	12.7	13.2	145	90	111	432	280	375 ^a
173258	W.F.	1/23/57	1/18/57	-	43.6	41.6	42.4	13.0	11.9	12.4	130	82	108	464	320	367 ^a
Current Mill Average:					43.4			13.0			110			354		
Cumulative Mill Average:					43.5			12.6			110			353		
Mill Factor, %					99.8			103.2			100.0			100.3		
Mill Index, %					100.9			102.4			101.9			104.1		

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA---JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE VI
MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
173125	W.F.	1/7/57	1/2/57	-	44.2	43.8	44.0	13.6	13.0	13.2	139	100	119	472	320	378 ^a
173126	W.F.	1/7/57	1/3/57	-	45.4	42.6	44.0	13.2	12.2	12.8	136	95	120	400	336	366 ^a
173142	W.F.	1/7/57	1/4/57	-	43.6	42.0	42.7	13.9	12.9	13.3	130	84	108	424	288	349 ^a
173193	W.F.	1/14/57	1/9/57	-	44.0	42.0	43.2	12.8	11.8	12.3	132	100	113	368	296	335 ^a
173194	W.F.	1/14/57	1/10/57	-	44.0	43.0	43.6	14.0	12.8	13.3	132	80	105	416	304	351 ^a
173195	W.F.	1/14/57	1/11/57	-	45.0	44.0	44.1	13.2	12.5	12.9	122	74	105	448	344	366 ^a
173256	W.F.	1/23/57	1/16/57	-	43.6	41.6	42.4	13.6	12.8	13.2	127	87	105	360	232	301 ^a
173257	W.F.	1/23/57	1/17/57	-	45.6	43.2	44.4	13.9	12.7	13.2	145	90	111	432	280	375 ^a
173258	W.F.	1/23/57	1/18/57	-	43.6	41.6	42.4	13.0	11.9	12.4	130	82	108	464	320	367 ^a
Current Mill Average:					43.4			13.0			110			354		
Cumulative Mill Average:					43.5			12.6			110			353		
Mill Factor, %					99.8			103.2			100.0			100.3		
Mill Index, %					100.9			102.4			101.9			104.1		

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE VII
MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
173188	WFLS	1/14/57	1/ 3/57	2	42.4	40.6	13.0	12.1	135	85	344	312
173189	WFLS	1/14/57	1/ 8/57	2	45.8	42.4	14.2	13.8	126	93	384	312
173302	WFLS	1/28/57	1/18/57	2	42.4	40.8	13.9	12.7	112	82	416	288
Current Mill Average:					42.3		13.2		107		334	
Cumulative Mill Average:					42.7		13.2		106		336	
Mill Factor, %					99.1		100.0		100.9		99.4	
Mill Index, %					98.4		103.9		99.1		98.2	
											341	
											355	
											96.1	
											91.2	

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE VIII

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. Range		Elmendorf Tear, g./sheet		Across
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.
173046	W.B.	1/ 2/57	12/ 7/56	-	45.8	43.2	12.9	11.9	126	89	109	432	336
173111	W.B.	1/ 4/57	12/18/56	-	45.0	42.0	12.9	11.5	135	95	114	456	352
173112	W.B.	1/ 4/57	12/19/56	-	43.2	40.0	12.4	10.4	124	89	106	440	360
173047	W.B.	1/ 2/57	12/14/56	-	44.2	40.0	12.3	11.3	131	80	113	464	336
173048	W.B.	1/ 2/57	12/15/56	-	45.6	40.4	12.6	11.4	133	78	110	464	360
173049	W.F.	1/ 2/57	12/16/56	-	44.0	40.0	12.6	11.7	126	89	107	504	368
173150	W.B.	1/ 8/57	12/20/56	-	44.0	41.4	12.5	11.1	120	88	107	448	336
173151	W.B.	1/ 8/57	12/30/56	-	45.4	42.4	12.9	11.9	145	84	112	424	320
173205	W.B.	1/16/57	1/ 5/57	-	44.4	42.2	12.4	11.3	134	78	108	464	320
173206	W.B.	1/16/57	1/ 6/57	-	44.2	42.0	12.9	11.3	132	99	112	432	352
173250	W.B.	1/22/57	1/ 8/57	-	43.8	41.0	12.2	11.1	126	94	109	416	352
173251	W.B.	1/22/57	1/11/57	-	46.0	40.4	12.4	11.9	145	98	115	472	352
Current Mill Average:					43.1		12.0		110		381		403
Cumulative Mill Average:					43.0		12.2		103		380		409
Mill Factor, %					100.2		98.4		106.8		100.3		98.5
Mill Index, %					100.2		94.5		101.9		112.1		107.8

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE IX

MILL G -- 42-LB. LINERBOARD

File No	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i., gage			Elmendorf Tear, g./sheet			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
173050	W.F.	1/ 2/57	12/ 7/56	2	44.0	42.0	42.8	13.3	12.8	13.0	131	89	112	352	296	321	392	320	357 ^a
173051	W.F.	1/ 2/57	12/11/56	2	42.4	41.8	42.1	12.5	11.8	12.1	136	96	118	368	288	321	416	320	367 ^a
173052	W.F.	1/ 2/57	12/13/56	2	44.0	42.0	43.1	13.6	12.8	13.1	131	86	110	352	296	327 ^a	384	320	369 ^a
173053	W.F.	1/ 2/57	12/14/56	2	44.0	41.0	42.7	13.7	12.3	13.0	134	91	110	384	280	322	392	320	359 ^a
173054	W.F.	1/ 2/57	12/14/56	2	43.4	42.0	42.5	13.1	12.7	12.9	136	90	116	368	288	325	400	328	370 ^a
173055	W.F.	1/ 2/57	12/17/56	2	44.0	42.0	42.7	13.1	12.2	12.7	135	100	116	352	272	306	400	320	363 ^a
173239	W.F.	1/21/57	1/10/57	2	43.8	41.6	42.9	14.1	12.5	13.3	133	88	110	352	240	297 ^a	400	320	356 ^a
173240	W.F.	1/21/57	1/ 9/57	2	44.0	41.2	42.9	13.8	12.4	13.1	131	72	109	384	256	307	400	336	367 ^a
Current Mill Average:					42.7			12.9			113			316			363		
Cumulative Mill Average:					43.0			12.5			110			328			372		
Mill Factor, %					99.3			103.2			102.7			96.3			97.6		
Mill Index, %					99.3			101.6			104.6			92.9			97.1		

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE X
MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I., gage		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
173056	W.F.	1/ 2/57	12/19/56	2	44.0	43.2	13.1	12.4	130	82	106	432
173057	W.F.	1/ 2/57	12/19/56	2	44.0	42.8	13.0	12.4	124	84	103	424
173122	W.F.	1/ 7/57	12/26/56	2	44.0	43.8	12.9	11.8	135	92	113	432
173123	W.F.	1/ 7/57	12/26/56	2	43.4	42.0	12.9	12.0	124	81	103	384
173198	W.F.	1/15/57	1/ 6/57	2	43.8	42.0	13.0	12.2	125	83	106	432
173199	W.F.	1/15/57	1/ 8/57	2	43.6	42.8	12.6	12.0	125	74	104	424
Current Mill Average:					43.2		12.5		106		351	
Cumulative Mill Average:					42.9		12.3		108		341	
Mill Factor, %					100.7		101.6		98.1		102.9	
Mill Index, %					100.5		98.4		98.1		103.2	
											100.3	
											100.8	

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XI

MILL I -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet		Across Max. Min. Av.						
					Max.	Min.	Max.	Min.	Max.	Min.	In Max. Min. Av.								
												Av.		Av.	Av.	Av.			
173058	WFLS	1/ 2/57	12/15/56	1	44.0	43.4	43.8	13.1	12.0	12.6	130	80	108	304	272	288	400	336	365 ^a
173120	WFLS	1/ 7/57	1/ 4/57	1	43.0	41.2	42.4	12.7	11.7	12.0	128	86	111	368	264	309 ^a	432	328	362 ^a
173121	WFLS	1/ 7/57	1/ 1/57	1	43.0	42.0	42.2	12.7	11.5	12.0	128	90	111	384	288	332	432	336	364 ^a
173190	WFLS	1/14/57	1/ 5/57	1	42.8	42.0	42.2	12.2	11.3	11.9	129	86	108	352	272	302 ^a	416	336	371 ^a
173200	WFLS	1/15/57	1/ 7/57	1	43.8	42.0	42.5	12.3	11.5	11.8	130	90	107	360	256	299	416	336	365 ^a
173201	WFLS	1/15/57	1/ 8/57	1	43.6	42.0	42.4	12.2	11.1	11.8	132	97	112	416	272	319 ^a	432	336	376 ^a
Current Mill Average:							42.6			12.0			109			308			367
Cumulative Mill Average:							42.9			12.4			108			312			371
Mill Factor, %							99.3			96.8			100.9			98.7			98.9
Mill Index, %							99.1			94.5			100.9			90.6			98.1

MILL I -- 42-LB. LINERBOARD

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XII
MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I., Page			Elmendorf Tear, g./sheet		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
173191	W.F.	1/14/57	1/7/57	-	44.6	41.6	43.5	13.8	12.3	12.9	130	98	118	408	320	354 ^a
173192	W.F.	1/14/57	1/7/57	-	43.8	41.1	42.8	13.2	12.1	12.6	135	100	116	416	336	364 ^a
173272	W.F.	1/24/57	1/16/57	-	44.2	42.0	43.1	13.0	11.6	12.4	136	101	117	384	296	329 ^a
173273	W.F.	1/24/57	1/16/57	-	45.6	42.2	43.3	13.0	11.8	12.6	146	98	119	400	280	343 ^a
Current Mill Average:					43.2			12.6			118			348		
Cumulative Mill Average:					42.8			12.6			107			352		
Mill Factor, %					100.9			100.0			110.3			98.9		
Mill Index, %					100.5			99.2			109.3			102.4		

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA—JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XIII

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting Strength,		Elmendorf Tear,																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					lb.		points		P.S.I. Rags		g./sheet		Across																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XIV

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet								
					Max. Min.		Max. Min.		Max. Min.		In		Across						
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
173061	W.F.	1/ 2/57	12/ 4/56	1	44.2	42.8	43.4	14.7	13.0	13.5	135	106	121	416	272	325 ^a	440	360	395 ^a
173062	W.F.	1/ 2/57	12/ 8/56	1	43.8	42.0	43.1	14.0	12.7	13.5	152	101	121	368	288	322	432	368	403 ^a
173063	W.F.	1/ 2/57	12/ 9/56	1	43.8	41.8	42.4	15.0	13.8	14.3	132	94	114	368	256	319 ^a	448	352	397 ^a
173064	W.F.	1/ 2/57	12/13/56	1	43.4	41.8	42.2	14.0	13.0	13.6	153	92	120	360	272	321 ^a	432	360	391 ^a
Current Mill Average:					42.8		13.7		119		322		396						
Cumulative Mill Average:					42.7		13.1		116		319		375						
Mill Factor, %					100.2		104.6		102.6		100.9		105.6						
Mill Index, %					99.5		107.9		110.2		94.7		105.9						

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XIV
MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	In	Across
173061	W.F.	1/ 2/57	12/ 4/56	1	44.2	42.8	43.4	14.7	13.0	13.5	416	272
173062	W.F.	1/ 2/57	12/ 8/56	1	43.8	42.0	43.1	14.0	12.7	13.5	368	288
173063	W.F.	1/ 2/57	12/ 9/56	1	43.8	41.8	42.4	15.0	13.8	14.3	368	256
173064	W.F.	1/ 2/57	12/13/56	1	43.4	41.8	42.2	14.0	13.0	13.6	360	272
Current Mill Average:					42.8		13.7		119		322	
Cumulative Mill Average:					42.7		13.1		116		319	
Mill Factor, %					100.2		104.6		102.6		100.9	
Mill Index, %					99.5		107.9		110.2		94.7	
											396	
											375	
											105.6	
											105.9	

aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA—JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XV

MILL M -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Klensdorf Tear, g./sheet								
					Max.	Min.	Av.	Max.	Min.	Av.	In		Across						
											Max.	Min.	Av.	Max.	Min.	Av.			
173179	W.	1/11/57	12/12/56	4	44.0	42.0	43.1	13.7	13.0	13.2	129	82	107	400	344	366 ^a	424	360	381 ^a
173180	W.	1/11/57	12/20/56	4	44.4	41.4	43.2	14.1	12.9	13.4	139	96	111	456	352	397 ^a	416	344	369 ^a
Current Mill Average:					43.2			13.3		109		382		375					
Cumulative Mill Average:					43.0			13.1		109		353		382					
Mill Factor, %					100.5			101.5		100.0		108.2		98.2					
Mill Index, %					100.5			104.7		100.9		112.4		100.3					

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XVI

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
173065	WF1S	1/ 2/57	12/20/56	1	44.0	42.0	13.0	12.0	147	93	432	336
173119	WF1S	1/ 7/57	12/31/56	1	44.0	42.0	13.1	11.6	135	86	432	296
173187	WF1S	1/14/57	1/ 1/57	1	45.2	43.8	12.7	11.9	128	97	416	352
173304	WF1S	1/28/57	1/20/57	1	43.8	42.0	12.4	11.2	133	80	400	304
173305	WF1S	1/28/57	1/21/57	1	43.2	42.0	12.3	11.0	125	62	440	288
Current Mill Average:					42.9		12.0		112		373	
Cumulative Mill Average:					42.3		12.3		107		364	
Mill Factor, %					101.4		97.6		104.7		102.5	
Mill Index, %					99.8		94.5		103.7		109.7	
											417	
											397	
											105.0	
											111.5	

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XVII

MILL 0 -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I., gage			Elmendorf Tear, g./sheet		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
173117	W.F.	1/ 7/57	12/16/56	4	42.2	41.8	42.0	11.9	10.9	11.4	130	88	116	400	288	335 ^a
173118	W.F.	1/ 7/57	12/21/56	4	43.6	42.0	42.8	12.0	11.0	11.5	129	95	112	352	288	323 ^a
Current Mill Average:					42.4			11.4			114			329		
Cumulative Mill Average:					42.3			11.9			111			351		
Mill Factor, %					100.2			95.8			102.7			93.7		
Mill Index, %					98.6			89.8			105.6			96.8		
														363		
														384		
														94.5		
														97.1		

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA—JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XVIII

MILL P -- 42-LB. LUMBERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Calliper, points		Bursting Strength, P.S.I. Gage		Klendorff Tear, g./sheet	
					Max.	Min.	Max.	Min.	Max.	Min.	In	Across
173226	W.F.	1/21/57	1/9/57	-	44.0	41.8	13.9	12.7	128	92	288	384
173227	W.F.	1/21/57	1/14/57	-	45.8	42.4	14.0	12.2	133	97	312	376
173228	W.F.	1/21/57	1/14/57	-	44.4	42.0	14.0	12.6	140	95	320	368
173229	W.F.	1/21/57	1/14/57	-	44.0	43.0	13.2	12.8	133	90	328	376
173230	W.F.	1/21/57	1/15/57	-	45.4	42.0	13.2	11.9	127	94	288	400
173231	W.F.	1/21/57	1/15/57	-	44.4	42.2	12.9	11.8	132	87	280	368
173270	W.F.	1/24/57	1/21/57	-	44.4	41.6	13.3	12.1	126	87	304	408
173271	W.F.	1/24/57	1/22/57	-	44.2	42.2	13.0	12.3	126	95	312	384
Current Mill Average:					43.4		12.8		113		340	376
Cumulative Mill Average:					42.9		12.6		108		348	377
Mill Factor, %					101.2		101.6		104.6		97.7	99.7
Mill Index, %					100.9		100.8		104.6		100.0	100.5

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XIX

MILL Q -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet								
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In	Across				
173116	WFLS	1/ 7/57	1/ 3/57	1	44.4	42.4	43.6	13.6	12.0	12.9	123	83	103	416	288	345 ^a	408	328	357 ^a
Current Mill Average:							43.6			12.9			103			345			357
Cumulative Mill Average:							43.1			13.0			108			321			363
Mill Factor, %							101.2			99.2			95.4			107.5			98.3
Mill Index, %							101.4			101.6			95.4			101.5			95.5

TABLE XX

MILL S -- 42-LB. LINERBOARD

173169	WFLS	1/10/57	1/1/57	1	43.4	42.2	42.7	13.3	12.4	12.9	134	90	113	336	264	308 ^a	400	320	353 ^a
173170	WFLS	1/10/57	1/1/57	1	43.6	42.0	42.8	13.2	12.5	12.9	135	101	116	368	288	335	392	304	351 ^a
173186	WFLS	1/14/57	1/1/57	1	43.2	41.4	42.6	14.2	12.4	13.3	128	95	113	360	216	300 ^a	368	304	336 ^a
173309	WFLS	1/28/57	1/23/57	1	44.0	42.4	43.6	13.9	12.1	13.0	137	101	114	360	272	313	400	328	361 ^a
Current Mill Average:					42.9		13.0		114		314		350						
Cumulative Mill Average:					42.9		13.0		111		322		357						
Mill Factor, %					100.0		100.0		102.7		97.5		98.0						
Mill Index, %					99.8		102.4		105.6		92.4		93.6						

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXI

MILL R -- MISCELLANEOUS

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting Strength,		Elmendorf Tear,								
					lb.		points		p.s.i. gage		g./sheet								
					Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.					
173225	FF2S	1/21/57	1/16/57	2	47.8	46.0	47.1	14.9	14.0	14.6	97	62	83	456	336	392 ^a	472	336	373 ^a
Current Mill Average:							47.1		14.6		83					392			373
Cumulative Mill Average:							47.4		14.2		98					385			388
Mill Factor, %							99.4		102.8		84.7					101.8			96.1

47-lb. Drum Linerboard

69-lb. Linerboard

173224	FF1S	1/21/57	1/10/57	2	70.0	66.0	67.8	22.9	21.3	22.0	170	110	137	552	416	488 ^a	720	496	615 ^a
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^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XXII, the atmospheric conditions used prior to and during the testing period were relatively uniform for the mills which reported this information. However, the conditioning periods varied considerably.

TABLE XXII

Code	Preconditioning			Conditioning		
	R.H., %	Temp., °F.	Time, hr.	R.H., %	Temp., °F.	Time, hr.
A		None		50	73	24
B	48-54	65-74	0.5	50	70	24-48
C		No samples submitted.				
D	35-36	78	8	49-50	71-72	16
E	50	70-80	24		None	
F		None		50-54	71-73	48
G	50	73	24	50	73	24
H		None		50	73	24
I		None		50-53	68-76	--
J		None		50	73	0.5
K	50	73	24	50	73	--
L		None		66-78	84-90	--
M		None		55-56	72-73	--
N	50	73	24		None	
O		None		50	73	24
P		None		50	73	24
Q	66	74	24	72	74	1.5
S		None		42-57	72-92	0

A summary of the Institute and mill test results for the current period is shown in Table XXIII, and a comparison of differences between Institute and mill test results is given in Table XXIV for the current period and the two previous periods. The comparisons are given in Tables

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XXII, the atmospheric conditions used prior to and during the testing period were relatively uniform for the mills which reported this information. However, the conditioning periods varied considerably.

TABLE XXII

Code	Preconditioning			Conditioning		
	R.H., %	Temp., °F.	Time, hr.	R.H., %	Temp., °F.	Time, hr.
A		None		50	73	24
B	48-54	65-74	0.5	50	70	24-48
C		No samples submitted.				
D	35-36	78	8	49-50	71-72	16
E	50	70-80	24		None	
F		None		50-54	71-73	48
G	50	73	24	50	73	24
H		None		50	73	24
I		None		50-53	68-76	--
J		None		50	73	0.5
K	50	73	24	50	73	--
L		None		66-78	84-90	--
M		None		55-56	72-73	--
N	50	73	24		None	
O		None		50	73	24
P		None		50	73	24
Q	66	74	24	72	74	1.5
S		None		42-57	72-92	0

A summary of the Institute and mill test results for the current period is shown in Table XXIII, and a comparison of differences between Institute and mill test results is given in Table XXIV for the current period and the two previous periods. The comparisons are given in Tables

XXV to XLII, for the 42-lb. liner samples. A comparison of the special drum and miscellaneous stock is given in Table XLIII. In all the comparisons given in Tables XXV to XLIII, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XXIII and XXIV reveals the level of agreement between mill and Institute data for basis weight, caliper, bursting strength, and Elmendorf tear. Table XXIII shows the average difference between Institute and mill test results for all sample lots submitted by each mill for the current period. In addition, the maximum difference encountered in comparing the Institute and mill test results for a given sample lot is shown. In Table XXIV, the average differences shown for each test in Table XXIII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XXIV that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is three per cent for the current period. By comparison, the maximum percentage variation noted for the previous two periods was five per cent. Further, it may be noted that the average basis weight results for Mills B, E, G, N, O and Q are higher than those for the Institute, the average result for Mill P is the same, and the average results for the other mills are lower. None of the variations for the current period appear to be excessive.

The maximum variation in caliper for the current period is five per cent. This variation is slightly lower than the maximum variation for the

previous two periods--namely, seven per cent. Compared with the Institute's test results, the test results for all mills except B and I are lower. The results for Mills B and I are the same as those for the Institute. None of the variations appear to be excessive.

It may be noted in Table XXIV that the bursting strength results exhibited a maximum variation of eight per cent for the current period. The average results for Mills A, B, H, and K are higher than those for the Institute, the average result for Mills F, I, M, and N are the same, and the results for the other mills are lower. Only the variation associated with the results for Mills E, H, and O appeared to be excessive.

It may be seen in Tables XXIII and XXIV that the average machine direction tear results for Mills A, B, E, H, I, N, and Q are higher than those for the Institute, whereas the results for the other mills are lower. The maximum variation for the current period is nine per cent. The differences associated with Mills D and G may or may not be excessive--i.e., they are borderline cases.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, B, E, F, H, I, J, K, N, O, P, and Q are higher than those for the Institute, and the average results for the other mills are lower. The maximum variation for the current period is seventeen per cent. The variation noted for Mills J, N, and Q appear to be excessive.

SUMMARY OF TEST RESULT COMPARISONS (Average Mill and Institute Results)

[illegible]

'Comparison based on averages involved only those samples on which mill test data were submitted.

*** Average difference is the difference between the Institute mill averages and the mill average based on mill test data.

 difference is the difference between the Institute mill averages and the mill average based on mill test data.
 maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XXIV
COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS
Average Differences, per cent

Mill	Period	Basic Weight	Caliper	Bursting Strength	Tearing Strength, In	Across
A	Current	-2	-5	+5	+0.3	+5
	114th	-1	-2	+0.9	+7	+6
	113th	-2	-4	+3	+9	+8
B	Current	+0.2	0	+2	+4	+3
	114th	0	-2	+2	-0.6	+1
	113th	-1	0	+4	+7	+9
C	Current	--	--	--	--	--
	114th	-2	-4	-0.9	-18	-4
	113th	-2	-4	0	-18	-7
D	Current	-0.2	-3	-2	-9	-5
	114th	-0.9	-3	+0.9	-5	-3
	113th	-0.9	-2	+0.9	-7	-2
E	Current	+3	-3	-6	+4	+8
	114th	--	--	--	--	--
	113th	+2	-0.8	-6	-2	+3
F	Current	-1	-3	0	-7	+0.7
	114th	-2	-3	+3	-5	+2
	113th	-0.9	-2	+4	-4	-2
G	Current	+0.5	-3	-0.9	-9	-2
	114th	+0.9	-2	-0.9	-12	-2
	113th	+0.5	+0.8	0	-2	+2
H	Current	-1	-3	+6	+2	+9
	114th	+0.9	-3	+5	-2	+5
	113th	0	+2	+0.9	+0.9	+7
I	Current	-0.7	0	0	+6	+7
	114th	-1	-2	-3	+5	+5
	113th	-0.7	-2	0	+5	+5
J	Current	-0.9	-3	-3	-6	+13
	114th	-0.9	-2	-3	+6	+14
	113th	0	-3	+1	-0.6	+11
K	Current	-2	-3	+3	-6	+3
	114th	-0.2	-2	0	-4	+5
	113th	-0.9	-3	+5	+5	+9
L	Current	-1	-4	-8	-8	-1
	114th	-2	-4	-3	-5	-1
	113th	-2	-4	-5	-8	+0.3
M	Current	-1	-4	0	-2	-3
	114th	-0.7	-4	+3	+5	+3
	113th	+1	0	-4	+14	+11
N	Current	+0.2	-2	0	+2	+17
	114th	0	-2	+1	-7	+7
	113th	+0.5	-2	+3	+7	+19
O	Current	+0.2	-2	-7	-5	+0.6
	114th	-0.7	-2	-3	-12	-5
	113th	+0.7	-2	-6	-6	-3
P	Current	0	-4	-5	-1	+1
	114th	+0.7	-4	-3	+2	+6
	113th	--	--	--	--	--
Q	Current	+2	-5	-3	+4	+13
	114th	-2	-4	-4	+22	+16
	113th	+5	-2	-6	+8	+5
S	Current	-2	-5	-4	-5	-2
	114th	-2	-7	-4	-8	-4
	113th	-1	-4	-2	-0.9	+0.3

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957

TABLE XIV

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting Strength,		Elmendorf Tear,	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across
				lb.		points		P.S.I., gage		g./sheet	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
173059	W.F.	12/16/56	2	44.2	-1.1	12.8	-0.6	112	+4	353 ^a	328
173060	W.F.	12/19/56	2	43.8	-0.9	12.7	-0.6	114	-1	385 ^a	330
173171	W.F.	1/1/57	2	43.6	-0.2	12.8	-0.6	110	+5	347 ^a	339
173172	W.F.	1/3/57	2	43.6	-0.7	12.4	-0.3	112	-1	333 ^a	319
173203	W.F.	1/10/57	1	44.1	-0.8	12.5	-0.4	108	+6	298	339
173204	W.F.	1/10/57	1	44.1	-0.7	12.4	-0.3	114	0	311 ^a	337
173254	W.F.	1/13/57	2	43.5	-0.7	13.0	-0.7	107	+9	329 ^a	337
173255	W.F.	1/16/57	1	43.2	-0.6	13.0	-0.8	104	+11	345 ^a	338
173307	W.F.	1/20/57	2	44.0	-0.8	12.6	-0.4	105	+9	319 ^a	340
173308	W.F.	1/20/57	2	43.1	-0.3	12.5	-0.4	102	+11	315	344
Current Mill Average:				43.7	-0.7	12.7	-0.6	109	+5	334	335
										367	385
										+1	+18

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XVI

MILL B -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across
173152	W.F.	1/ 1/57	1	43.1	+0.2	13.1	13.1	103	105	311 ^a	365 ^a
173163	W.F.	1/ 3/57	1	43.0	+0.1	13.2	13.0	107	107	302 ^a	366 ^a
173249	W.F.	1/17/57	1	43.3	+0.3	13.1	13.1	106	106	324	360 ^a
173306	W.F.	1/21/57	1	42.5	0.0	11.5	11.6	113	117	277 ^a	339 ^a
Current Mill Average:				43.0	+0.1	12.7	12.7	107	109	304	358
										315	369
										+11	+11

TABLE XVII

MILL C -- 42-LB. LINERBOARD

No Samples Submitted

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXVIII

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet		Across	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Diff.	IPC	Mill Diff.
173125	W.F.	1/ 2/57	-	44.0	43.8 -0.2	13.2	12.8 -0.4	119	108 -11	378 ^a	336	387 ^a	353 -34
173126	W.F.	1/ 3/57	-	44.0	43.7 -0.3	12.8	12.1 -0.7	120	117 -3	366 ^a	312	368 ^a	351 -17
173142	W.F.	1/ 4/57	-	42.7	42.5 -0.2	13.3	12.9 -0.4	108	104 -4	349 ^a	324	381 ^a	349 -32
173193	W.F.	1/ 9/57	-	43.2	42.7 -0.5	12.3	12.0 -0.3	113	111 -2	335 ^a	313	371 ^a	348 -23
173194	W.F.	1/10/57	-	43.6	42.9 -0.7	13.3	13.0 -0.3	105	104 -1	351 ^a	324	363 ^a	352 -11
173195	W.F.	1/11/57	-	44.1	43.8 -0.3	12.9	12.6 -0.3	105	109 +4	366 ^a	321	380 ^a	377 -3
173256	W.F.	1/16/57	-	42.4	42.1 -0.3	13.2	12.7 -0.5	105	109 +4	301 ^a	311	345 ^a	323 -22
173257	W.F.	1/17/57	-	44.4	44.7 -0.3	13.2	12.7 -0.5	111	111 0	375 ^a	339	385 ^a	372 -13
173258	W.F.	1/18/57	-	42.4	43.3 +0.9	12.4	12.0 -0.4	108	101 -7	367 ^a	320	379 ^a	351 -28
Current Mill Average:				43.4	43.3 -0.1	13.0	12.6 -0.4	110	108 -2	354	322	373	353 -20

TABLE XXIX

MILL E -- 42-LB. LINERBOARD

173188	W.F.S	1/ 3/57	2	41.7	42.8 +1.1	12.5	12.0 -0.5	113	106 -7	312 ^a	318	334 ^a	334 0
173189	W.F.S	1/ 8/57	2	43.5	45.3 +1.8	13.8	13.5 -0.3	109	102 -7	343 ^a	370	353 ^a	419 +66
173302	W.F.S	1/18/57	2	41.7	42.4 +0.7	13.2	13.0 -0.2	100	95 -5	345 ^a	360	335 ^a	350 +15
Current Mill Average:				42.3	43.5 +1.2	13.2	12.8 -0.4	107	101 -6	334	349	341	368 +27

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXVIII

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. range		Elmendorf Tear, g./sheet	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
173125	W.F.	1/ 2/57	-	44.0	-0.2	13.2	12.8 -0.4	119	108 -11	378 ^a	353 -34
173126	W.F.	1/ 3/57	-	44.0	-0.3	12.8	12.1 -0.7	120	117 -3	366 ^a	351 -17
173142	W.F.	1/ 4/57	-	42.7	-0.2	13.3	12.9 -0.4	108	104 -4	349 ^a	349 -32
173193	W.F.	1/ 9/57	-	43.2	-0.5	12.3	12.0 -0.3	113	111 -2	335 ^a	348 -23
173194	W.F.	1/10/57	-	43.6	-0.7	13.3	13.0 -0.3	105	104 -1	351 ^a	352 -11
173195	W.F.	1/11/57	-	44.1	-0.3	12.9	12.6 -0.3	105	109 +4	366 ^a	377 -3
173256	W.F.	1/16/57	-	42.4	-0.3	13.2	12.7 -0.5	105	109 +4	301 ^a	323 -22
173257	W.F.	1/17/57	-	44.4	-0.3	13.2	12.7 -0.5	111	111 0	375 ^a	372 -13
173258	W.F.	1/18/57	-	42.4	+0.9	12.4	12.0 -0.4	108	101 -7	367 ^a	351 -28
Current Mill Average:				43.4	-0.1	13.0	12.6 -0.4	110	108 -2	354	353 -20

TABLE XXIX

MILL E -- 42-LB. LINERBOARD

173188	W.F.S	1/ 3/57	2	41.7	42.8 +1.1	12.5	12.0 -0.5	113	106 -7	312 ^a	334 ^a 0
173189	W.F.S	1/ 8/57	2	43.5	45.3 +1.8	13.8	13.5 -0.3	109	102 -7	343 ^a	419 +66
173302	W.F.S	1/18/57	2	41.7	42.4 +0.7	13.2	13.0 -0.2	100	95 -5	345 ^a	350 +15
Current Mill Average:				42.3	43.5 +1.2	13.2	12.8 -0.4	107	101 -6	334	368 +27

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXX

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i., gage		Elmendorf Tear, g./sheet		Across	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Diff.	IPC	Mill Diff.
173046	W.B.	12/ 7/56	-	44.4	43.5 -0.9	12.3	11.9 -0.4	109	110 + 1	360	-47	403 ^a	408 + 5
173111	W.B.	12/18/56	-	43.5	42.9 -0.6	12.1	11.6 -0.5	114	111 - 3	352	-39	400 ^a	397 - 3
173112	W.B.	12/19/56	-	41.6	41.2 -0.4	11.3	11.1 -0.2	106	109 + 3	344	- 9	398 ^a	391 - 7
173047	W.B.	12/14/56	-	42.6	42.5 -0.1	11.8	11.6 -0.2	113	111 - 2	356	-33	413 ^a	424 +11
173048	W.B.	12/15/56	-	42.9	42.4 -0.5	12.0	11.6 -0.4	110	113 + 3	359	-18	416 ^a	411 - 5
173049	W.F.	12/16/56	-	42.1	41.8 -0.3	12.2	11.7 -0.5	107	110 + 3	344	-33	414 ^a	404 -10
173150	W.B.	12/20/56	-	42.7	42.6 -0.1	12.0	11.8 -0.2	107	107 0	348	-23	400 ^a	409 + 9
173151	W.B.	12/30/56	-	44.0	43.8 -0.2	12.3	11.9 -0.4	112	114 + 2	359	-28	396 ^a	408 +12
173205	W.B.	1/ 5/57	-	43.4	42.6 -0.8	11.9	11.7 -0.2	108	112 + 4	364	-49	415 ^a	400 -15
173206	W.B.	1/ 6/57	-	43.0	42.5 -0.5	11.9	11.5 -0.4	112	108 - 4	365	- 2	385 ^a	413 +28
173250	W.B.	1/ 8/57	-	42.8	42.2 -0.6	11.7	11.3 -0.4	109	108 - 1	339	-12	391 ^a	411 +20
173251	W.B.	1/11/57	-	43.6	42.6 -1.0	12.1	11.8 -0.3	115	110 - 5	348	-40	410 ^a	396 -14
Current Mill Average:				43.1	42.6 -0.5	12.0	11.6 -0.4	110	110 0	353	-28	403	406 + 3

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXI

MILL G -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across
173050	W.F.	12/ 7/56	2	42.8	-0.2	13.0	12.5 -0.5	112	111 - 1	321	270 -51
173051	W.F.	12/11/56	2	42.1	0.0	12.1	11.8 -0.3	118	110 - 8	321	278 -43
173052	W.F.	12/13/56	2	43.1	+0.5	13.1	12.6 -0.5	110	113 + 3	327 ^a	296 -31
173053	W.F.	12/14/56	2	42.7	+0.7	13.0	12.7 -0.3	110	113 + 3	322	306 -16
173054	W.F.	12/14/56	2	42.5	+0.4	12.9	12.5 -0.4	116	116 0	325	305 -20
173055	W.F.	12/17/56	2	42.7	+0.2	12.7	12.5 -0.2	116	112 - 4	306	299 - 7
173239	W.F.	1/10/57	2	42.9	+0.1	13.3	12.8 -0.5	110	110 0	297 ^a	281 -16
173240	W.F.	1/ 9/57	2	42.9	-0.2	13.1	12.8 -0.3	109	109 0	307	264 -43
Current Mill Average:				42.7	+0.2	12.9	12.5 -0.4	113	112 - 1	316	287 -29
										363	357 - 6

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXXII

MILL B -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		In		Elmendorf Tear, g./sheet		Across	
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
173056	W.F.	12/19/56	2	43.8	44.0	+0.2	12.8	12.2	-0.6	106	110	+4	372	355	-17
173057	W.F.	12/19/56	2	43.6	43.8	+0.2	12.8	12.1	-0.7	103	111	+8	347	355	+8
173122	W.F.	12/26/56	2	43.9	44.6	+0.7	12.3	12.1	-0.2	113	117	+4	358 ^a	361	+3
173123	W.F.	12/26/56	2	42.2	43.7	+1.5	12.4	12.1	-0.3	103	108	+5	365 ^a	354	-11
173198	W.F.	1/ 6/57	2	42.7	43.0	+0.3	12.7	12.2	-0.5	106	115	+9	335 ^a	365	+30
173199	W.F.	1/ 8/57	2	43.2	43.1	-0.1	12.2	12.1	-0.1	104	110	+6	331 ^a	361	+30
Current Mill Average:				43.2	43.7	-0.5	12.5	12.1	-0.4	106	112	+6	351	358	+7

TABLE XXXIII

MILL I -- 42-LB. LINERBOARD

173058	W.F.S	12/15/56	1	43.8	42.5	-1.3	12.6	12.4	-0.2	108	109	+1	288	321	+33
173120	W.F.S	1/ 4/57	1	42.4	42.5	+0.1	12.0	12.1	+0.1	111	108	-3	309 ^a	329	+20
173121	W.F.S	1/ 1/57	1	42.2	42.1	-0.1	12.0	12.0	0.0	111	110	-1	332	333	+1
173190	W.F.S	1/ 5/57	1	42.2	42.2	0.0	11.9	12.0	+0.1	108	108	0	302 ^a	325	+23
173200	W.F.S	1/ 7/57	1	42.5	42.2	-0.3	11.8	11.7	-0.1	107	107	0	299	331	+32
173201	W.F.S	1/ 8/57	1	42.4	42.2	-0.2	11.8	11.7	-0.1	112	109	-3	319 ^a	331	+12
Current Mill Average:				42.6	42.3	-0.3	12.0	12.0	0.0	109	109	0	308	328	+20

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXXIV

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		In		Elmendorf Tear, g./sheet		Across	
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
173191	W.F.	1/ 7/57	-	43.5	42.0	-1.5	12.9	12.2	-0.7	118	116	-2	354 ^a	330	-24
173192	W.F.	1/ 7/57	-	42.8	42.8	0.0	12.6	12.4	-0.2	116	113	-3	364 ^a	354	-10
173272	W.F.	1/16/57	-	43.1	42.6	-0.5	12.4	12.1	-0.3	117	111	-6	329 ^a	291	-38
173273	W.F.	1/16/57	-	43.3	43.6	+0.3	12.6	12.3	-0.3	119	115	-4	343 ^a	329	-14
Current Mill Average:				43.2	42.8	-0.4	12.6	12.2	-0.4	118	114	-4	348	326	-22
													342	386	+44

TABLE XXXV

MILL K -- 42-LB. LINERBOARD

173124	S.F.	12/30/56	7	44.4	43.4	-1.0	13.4	13.0	-0.4	107	110	+3	352 ^a	331	-21	385 ^a	378	-7
173173	S.F.	1/ 1/57	7	42.8	42.7	-0.1	13.1	12.5	-0.6	107	110	+3	376	348	-28	391 ^a	392	+1
173217	S.F.	1/11/57	7	45.4	44.4	-1.0	13.7	13.5	-0.2	111	111	0	399 ^a	387	-12	395 ^a	434	+39
Current Mill Average:				44.2	43.5	-0.7	13.4	13.0	-0.4	108	111	+3	376	355	-21	391	401	+10

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXXVI

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i.		Elmendorf Tear, g./sheet					
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In		Across			
										IPC	Mill Diff.	IPC	Mill Diff.		
73061	w.F.	12/ 4/56	1	43.4	42.9 -0.5	13.5	13.1 -0.4	121	112 -9	325 ^a	298	-27	395 ^a	396	+ 1
73062	w.F.	12/ 8/56	1	43.1	41.9 -1.2	13.5	12.8 -0.7	121	109 -12	322	294	-28	403 ^a	386	-17
73063	w.F.	12/ 9/56	1	42.4	41.9 -0.5	14.3	13.8 -0.5	114	105 -9	319 ^a	296	-23	397 ^a	389	- 8
73064	w.F.	12/13/56	1	42.2	42.1 -0.1	13.6	13.2 -0.4	120	109 -11	321 ^a	296	-25	391 ^a	395	+ 4
Current Mill Average:				42.8	42.2 -0.6	13.7	13.2 -0.5	119	109 -10	322	296	-26	396	391	- 5

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XXXVIII

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		Elmendorf Tear, g./sheet	
				IPC	Mill	Diff.	IPC	Mill	Diff.	In	Across
173065	WFLS	12/20/56	1	42.9	42.7	-0.2	12.3	11.9	-0.4	114	115
173119	WFLS	12/31/56	1	42.9	43.0	+0.1	12.2	11.9	-0.3	117	108
173187	WFLS	1/1/57	1	44.4	43.9	-0.5	12.2	12.0	-0.2	114	117
173304	WFLS	1/20/57	1	42.2	42.8	+0.6	11.8	11.6	-0.2	103	112
173305	WFLS	1/21/57	1	42.3	42.6	+0.3	11.5	11.7	+0.2	111	109
Current Mill Average:				42.9	43.0	+0.1	12.0	11.8	-0.2	112	112
										0	0
										373	379
										+6	+6
										417	489
										+67	+67
										482	472
										471	471
										488	488
										532	532
										+124	+124
										417	489
										+72	+72

TABLE XXXIX

MILL O -- 42-LB. LINERBOARD

173117	W.F.	12/16/56	4	42.0	42.1	+0.1	11.4	11.1	-0.3	116	107	-9	335 ^a	321	-14	353 ^a	360	+7
173118	W.F.	12/21/56	4	42.8	42.8	0.0	11.5	11.3	-0.2	112	105	-7	323 ^a	307	-16	374 ^a	371	-3
Current Mill Average:				42.4	42.5	+0.1	11.4	11.2	-0.2	114	106	-8	329	314	-15	363	365	+2

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XL

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		Elmendorf Tear, g./sheet	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	In	Across
173226	W.F.	1/ 9/57	-	42.5	0.0	13.2	12.5 -0.7	107	100 - 7	335 ^a	324 -11
173227	W.F.	1/14/57	-	44.2	+0.2	13.0	12.5 -0.5	117	111 - 6	341 ^a	352 +11
173228	W.F.	1/14/57	-	43.6	+0.6	13.2	12.6 -0.6	116	108 - 8	345 ^a	335 -10
173229	W.F.	1/14/57	-	43.7	-0.3	13.0	12.6 -0.4	114	106 - 8	354 ^a	337 -17
173230	W.F.	1/15/57	-	43.6	-0.2	12.6	12.2 -0.4	115	112 - 3	336 ^a	341 + 5
173231	W.F.	1/15/57	-	43.3	+0.1	12.5	12.0 -0.5	116	113 - 3	318 ^a	324 + 6
173270	W.F.	1/21/57	-	43.0	0.0	12.5	12.1 -0.4	110	104 - 6	349 ^a	317 -32
173271	W.F.	1/22/57	-	43.5	-0.4	12.7	12.3 -0.4	110	105 - 5	340 ^a	351 +11
Current Mill Average:				43.4	43.4 0.0	12.8	12.3 -0.5	113	107 - 6	340	335 - 5
										376	380 + 4

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XLI

MILL Q -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, P.S.I. gage		In		Elmendorf Tear, g./sheet		Across	
				IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Diff.	IPC	Mill Diff.
173116	WFLS	1/ 3/57	1	43.6	44.6 +1.0	12.9	12.3 -0.6	103	100 -3	345 ^a	360	+15	357 ^a	404	+47
Current Mill Average:				43.6	44.6 +1.0	12.9	12.3 -0.6	103	100 -3	345	360	+15	357	404	+47

TABLE XLII

MILL S -- 42-LB. LINERBOARD

173169	WFLS	1/ 1/57	1	42.7	42.2 -0.5	12.9	12.3 -0.6	113	111 -2	308 ^a	300	-8	353 ^a	335	-18
173170	WFLS	1/ 1/57	1	42.8	42.2 -0.6	12.9	12.4 -0.5	116	109 -7	335	297	-38	351 ^a	338	-13
173186	WFLS	1/ 1/57	1	42.6	42.2 -0.4	13.3	12.7 -0.6	113	109 -4	300 ^a	341	+41	336 ^a	393	+57
173309	WFLS	1/23/57	1	43.6	42.1 -1.5	13.0	12.3 -0.7	114	108 -6	313	260	-53	361 ^a	307	-54
Current Mill Average:				42.9	42.2 -0.7	13.0	12.4 -0.6	114	109 -5	314	299	-15	350	343	-7

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--JANUARY 1 THROUGH JANUARY 31, 1957 (continued)

TABLE XLIII

MILL R -- MISCELLANEOUS

File No.	Finish	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting		Elmendorf Tear,			
				lb.	IPC Mill Diff.	points	IPC Mill Diff.	p.s.i. gage	IPC Mill Diff.	g./sheet	IPC Mill Diff.		
												IPC Mill Diff.	IPC Mill Diff.
<u>47-lb. Drum Linerboard</u>													
173225	WF2S	1/16/57	2	47.1	47.7 +0.6	14.6	13.6 -1.0	83	88 + 5	392 ^a	416 +24	373 ^a	412 +39
Current Mill Average:				47.1	47.7 +0.6	14.6	13.6 -1.0	83	88 + 5	392	416 +24	373	412 +39
<u>69-lb. Linerboard</u>													
173224	WF1S	1/10/57	2	67.8	69.3 +1.5	22.0	22 0.0	137	144 + 7	488 ^a	576 +88	615 ^a	692 +77

^aThis average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.
Note: All "current mill average" data are calculated from the totals of the individual readings.

